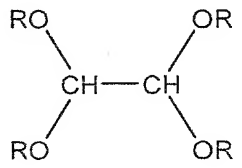
Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

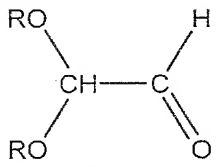
Listing of Claims:

1. (Currently Amended) Process for the separation of a glyoxal diacetal of formula (I)



(I)

in which R represents a linear or branched C_1 - C_4 alkyl group, from a crude mixture comprising said glyoxal diacetal and a glyoxal monoacetal of formula (II)



(II)

in which R is as defined above, ~~characterized in that~~wherein at least one step of countercurrentwise liquid-liquid extraction of said glyoxal diacetal is carried out using a solvent which is immiscible with the reaction medium, in order to obtain, on the one hand, a light phase comprising said

glyoxal diacetal and, on the other hand, a heavy phase including the other constituents of the crude mixture.

2. (Currently Amended) Process according to Claim 1, ~~characterized in that~~wherein said crude mixture comprises predominantly a glyoxal diacetal of formula (I) as defined in Claim 1, a glyoxal monoacetal of formula (II) as defined in Claim 1, and water.

3. (Original) Process according to Claim 1 or Claim 2, characterized in that the solvent is chosen from ethers, alkanes and aromatic hydrocarbons.

4. (Currently Amended) Process according to ~~any one of Claims~~claim 1 ~~to 3~~, ~~characterized in that~~wherein the solvent is chosen from cyclohexane, n-heptane and toluene.

5. (Currently Amended) Process according to ~~any one of Claims~~claim 1 ~~to 4~~, ~~characterized in that~~wherein the solvent/crude mixture ratio by weight is between 0.3/1 and 5/1.

6. (Currently Amended) Process according to ~~any one of Claims~~ claim 1 ~~to 5, characterized in that~~wherein the extraction is carried out at a temperature of approximately 10°C to 60°C, preferably at ambient temperature.

7. (Currently Amended) Process according to ~~any one of Claims~~claim 1 ~~to 6~~, ~~characterized in that~~wherein the light phase comprising the glyoxal diacetal of formula (I) and the solvent is subjected to a separation, on conclusion of which said glyoxal diacetal is recovered.

8. (Currently Amended) Process according to Claim 7, ~~characterized in that~~wherein this separation is carried out by distillation under reduced pressure.

9. (Currently Amended) Process according to ~~either one of Claims~~claim 7 ~~and~~ or 8, ~~characterized in that~~wherein this separation is carried out at a temperature of between ambient temperature and approximately 120°C.

10. (Currently Amended) Process according to any ~~one of Claims~~claim 1 ~~to 9~~, ~~characterized in that~~wherein the solvent is recycled to the liquid-liquid extraction step.

11. (Currently Amended) Process according to ~~any one of Claims~~claim 1 ~~to 10~~, ~~characterized in that~~wherein the crude mixture is obtained by an acetalization reaction of 40 to 75% by weight aqueous glyoxal with an alcohol of formula R-OH in which R is as defined in Claim 1, the R-OH/glyoxal molar ratio being between 10/1 and 50/1, preferably 10/1 to 30/1, in the presence of an acid catalyst, followed by the distillation

of the reaction mixture obtained in order to remove the excess alcohol R-OH.

12. (Currently Amended) Process according to ~~any one of Claims~~claim 1 ~~to 11~~, ~~characterized in that~~wherein, in the formulae (I) and (II), R is a C_1-C_2 alkyl group.

13. (Currently Amended) Process according to Claim 12, ~~characterized in that~~wherein R is a methyl group.

14. (Currently Amended) Process according to ~~any one of Claims~~ claim 1 ~~to 13~~, ~~characterized in that~~wherein the alcohol is methanol.

15. (Currently Amended) Process according to ~~any one of Claims~~claim 1 ~~to 14~~, ~~characterized in that~~wherein the crude mixture comprises predominantly 1,1,2,2-tetramethoxy-ethane (TME), dimethoxyethanal (DME) and water.

16. (Currently Amended) Process according to ~~any one of Claims~~claim 1 ~~to 15~~, ~~characterized in that~~wherein said mixture comprises, as percentages by weight, approximately 25 to 60% of TME, approximately 7 to 35% of DME and approximately 20 to 50% of water.

17. (Currently Amended) Process according to ~~any one of Claims~~claim 1 ~~to 16~~, ~~characterized in that~~wherein said

mixture also comprises, as percentages by weight, approximately 0 to 15% of glyoxal, approximately 0 to 10% of methanol and approximately 0 to 5% of impurities.

18. (Currently Amended) Process according to ~~any one of Claims~~claim 11 ~~to 17~~, ~~characterized in that~~wherein the glyoxal used in the acetalization reaction is concentrated to approximately 60 to 70%.

19. (Currently Amended) Process according to Claim 18, ~~characterized in that~~wherein the glyoxal is concentrated from an aqueous solution.

20. (Currently Amended) Process according to ~~any one of Claims~~claim 11 ~~to 19~~, ~~characterized in that~~wherein the acetalization reaction is carried out for a period of time of less than or equal to 1 h, preferably of less than or equal to 40 min.

21. (Currently Amended) Process according to Claim 20, ~~characterized in that~~wherein the period of time of the reaction is less than or equal to 20 min.

22. (Currently Amended) Process according to ~~one of Claims~~claim 11 ~~to 21~~, ~~characterized in that~~ wherein the acetalization reaction is carried out at a temperature of the order of 60°C to 140°C, preferably approximately 80°C to

130°C.

23. (Currently Amended) Process according to Claim 22, ~~characterized in that~~wherein the temperature is of the order of 100 to 130°C.

24. (Currently Amended) Process according to ~~one of Claims~~claim 11 ~~to 23~~, ~~characterized in that~~wherein the acetalization reaction is carried out at a pressure of greater than or equal to atmospheric pressure.

25. (Currently Amended) Process according to Claim 24, ~~characterized in that~~wherein the pressure is less than or equal to 15 bar.

26. (Currently Amended) Process according to ~~any one of Claims~~claim 1 ~~to 25~~, ~~characterized in that~~wherein the acetalization reaction, the liquid-liquid extraction step and the recovery of the various constituents of the crude mixture are carried out continuously, the glyoxal, the glyoxal monoacetal, the alcohol R-OH and the extraction solvent being recycled.